First Session: Clinical and Pathological.

Introduction.

HARRY S. N. GREENE.
Yale University School of Medicine, New Haven, Conn.

With increasing knowledge of the natural histories of tumors, it has become more and more apparent that there are many neoplastic diseases rather than one. Conferences for the separate consideration of specific tumor types are now the fashion and in no instance is this more fully justified than in the case of the melanomas. The well marked peculiarities of such tumors, with their failure to conform to the more or less conventional lines of behavior established by the more orthodox carcinomas and sarcomas, set them apart as black sheep of the neoplastic family and engender the necessity for individual study and special examination.

The source of the neoplastic cell, its development to biological autonomy and mode of dissemination, constitute problems differing in their fundamental conditions from those associated with other tumors. Fortunately, the differing conditions tend to facilitate investigation and, by their anomolous nature, may suggest fertile approaches to the general cancer problem. The occurrence of melanoblasts in heterotopic aggregates called nevi, presents an unparalleled situation in neoplastic disease, for here, assembled by some dysontogenetic process in convenient, lasting foci, are the cells intrinsic to the disease. By virtue of location in readily accessible, non-vital regions, the conversion to neoplastic elements and the development of the properties of invasibility and metastasizability are open to morphological and biological investigation as well as to clinical study. Further, the indiscriminate incidence of nevi with occurence in different locations, sexes and races, and their persistence throughout the different age periods and endocrine disturbances of an individual's life, allow an assessment of the significance of constitutional, intrinsic factors in the biological progress of the lesion.

One of the more marked variations from the behavior pattern of other tumors concerns the dissemination of the melanomas. The mode of spread in general neoplastic disease is by lymphatic extension or metastasis and it is customary to explain the occurrence of secondary foci of melanomas as a result of one of these processes. There is no question that fully developed, autonomous melanomas follow such routes of spread, but there is both clinical and experimental evidence to suggest that secondary foci may occur before the primary tumor attains the ability to metastasize. For example, when a secondary focus is found as far distant from a primary tumor in the scalp as a popliteal node, it is generally considered to be a blood-borne metastasis. Yet, if such a node is removed, the patient may survive for a number of years with no further evidence of tumor spread. Inasmuch as blood-borne metastasis entails the entrance of tumor cells into the blood stream with eventual lodgement and growth in multiple foci, it would appear either that the popliteal node represented the rare phenomenon of solitary metastasis or that in actuality it was not a metastasis at all. Evidence favoring this latter possibility is obtained from transplantation experiments. It appears to be a rule that all tumors capable of metastasis (and therefore all metastases) are hetero-transplantable; yet, it has been a frequent experience that nodes of the type cited above fail to grow when transferred to guinea pigs. Successful transplantation portends death, the survival period after heterologous growth averaging six months. It must be concluded from this either that the rule of transplantability applicable to other tumors does not hold in the case of melanomas, or that a different mechanism of dissemination exists. The point should not be labored in the present context and is mentioned only to emphasize an unexplored possibility of potential significance to an understanding of the tumors to be discussed.

The problems presented by the behavior of the melanotic tumors pertain to many different disciplines. The embryologist, the biochemist, the geneticist, the endocrinologist, the clinician, and even the pathologist, recognize fields of interest, and a definite hazard exists that the fruits of such interest may be limited by scope or publication to the individual specialty. It would appear to be a primary purpose of this conference to counteract the biased inclination of special interests and to emphasize that while the melanoma provides an excellent tool for the biochemist to study biochemistry; the embryologist, embryology; the geneticist, genetics, etc., the central problem concerns the melanoma as a malignant tumor.